

NOTES ON THE GRASS FLORA
OF THE CHICAGO REGION. II.

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Since the publication of my last article on grasses of the Chicago region (1957), I have uncovered a substantial amount of additional information. This includes new county and regional records, notes on misidentified specimens or unverified records, a list of excluded species, and other pertinent information.

Specimens cited were examined by me at the following herbaria: Chicago Natural History Museum (F), University of Illinois, Navy Pier (CHI), University of Illinois, Urbana (ILL), Illinois Natural History Survey (ILLS), Butler University (B), Indiana University (I), University of Notre Dame (ND), Purdue University (PUR), and University of Wisconsin (WIS). I want to thank the curators of these herbaria for the privilege of studying their specimens.

Aegilops cylindrica Host. LAKE (Indiana): Hammond, *Glassman 4215* (CHI). A native of Europe which has been collected only in railroad yards in the region. First reported from the region (Cook county) by Thieret and Evers (1957).

Agropyron smithii Rydb. var. **smithii**. COOK: Chicago, *Thieret 2350, 2351, 2352* (F), *A. Johnson 3* (F); Morton Grove, *Glassman 3717, 4139, 4319* (CHI); Palos Park, *Umbach 3468* (WIS). LAKE: (Illinois): Along Milwaukee R. R., east of Round Lake Beach, *Glassman 4117, 4119* (CHI). Not previously recorded for Cook and Lake counties. This species is native west of the Mississippi River, but is adventive in the Chicago region where it occurs principally along railroad tracks.

The report of *A. smithii* by Deam et al. (1942) from La Porte county is based on a glaucous specimen (*Deam 52396, 1*) which appears to be *A. repens* (L.) Beauv. The glaucous character was seen in many specimens of *repens* as well as *smithii*.

A number of specimens examined are rather atypical or abnormal for *A. smithii*. In *Hill 87/1897* and *Bebb 621, 980*

from Lake county (Indiana) and *Glassman 4302, 4304* from Will county, some spikes have two spikelets at a node instead of one and some of these spikelets are unusually narrow. Otherwise, they fit this species. Some other specimens appear to be hybrids between *A. repens* and *A. smithii*. Before discussing them, a key distinguishing the two species is given below:

Glumes broadest near the middle, usually distinctly nerved, symmetrical, with acute tips or awn-pointed; lemmas awnless, awn-pointed or awned; upper blade surface shallowly grooved, blades 3-12 mm. wide, flat or involute, with soft or sharp pointed tips. *A. repens*
 Glumes broadest near the base, usually obscurely nerved, asymmetrical, with acuminate tips which are often awn-pointed; lemmas acuminate, mucronate or short awned; upper blade surface deeply and unevenly grooved, blades 2-5 mm. wide, usually involute, with sharp pointed tips *A. smithii*.

Umbach 3468 from Cook county, *Glassman 4227* and *Umbach* (no number) from Lake county (Indiana), and *Moffatt 142* from Du Page county, have glumes which are mostly strongly nerved. In *Umbach* (no number), however, they are with acute or mucronate tips, whereas in the others the glumes are broadest near the base and asymmetrical with acuminate tips. In one locality east of Round Lake Beach, a number of specimens were collected which apparently represent a hybrid swarm. *Glassman 4118, 4120* and *4121* have most of the characters of *A. repens*, but many of the glumes are shaped like *A. smithii* except that they are mostly strongly nerved; and *4119* is characteristic of *smithii* but most of the glumes are strongly nerved. *Glassman 4117* seems to be intermediate between the two species. The glumes are shaped like *smithii*, but almost all are distinctly nerved; and the blades are flat and up to 9 mm. wide with sharp tips, but some of the surfaces are deeply grooved like *smithii* while others are shallowly grooved like *repens*.

Agropyron smithii Rydb. var. **molle** (Scribn. & Smith) Jones. WILL: Gougars, *Glassman 4312a, 4313* (CHI). First reported from the region (Cook and Du Page counties) by Thieret and Evers (1957); these are new records for Will county. Both specimens are unusual in that some of the spikes have 2-4 spikelets per node instead of one. The re-

ports of *A. dasystachyum* (Hook.) Vasey from the Chicago region by Mosher (1918), Pepoon (1927), Hitchcock (1935), Fernald (1950), Chase (1951), and Jones and Fuller (1955) are based on *Moffat 231* and *Umbach* (no number) from Du Page county. These specimens belong to *A. smithii* var. *molle*. Many of the reports of *A. dasystachyum* for Illinois state the habitat as "along the shores of Lake Michigan". This species is found in the above habitat in Wisconsin and Michigan, but not in Illinois or Indiana. *A. smithii* var. *molle*, on the other hand, occurs only in the vicinity of railroad tracks in the Chicago region. In the Lake Michigan region, the two taxa can be distinguished as follows:

Glumes usually asymmetrical, acuminate tipped, broadest below the middle, obscurely or distinctly nerved; lemmas and usually glumes scabrous to short pilose *A. smithii* var. *molle*.

Glumes usually symmetrical, acute, broadest above the middle, distinctly nerved; lemmas and often glumes more or less densely villous *A. dasystachyum*.

Andropogon scoparius Michx. DU PAGE: Wheaton, *Moffatt 3315* (WIS). First record from Du Page county.

Andropogon virginicus L. Apparently, a recent arrival in the Chicago region where it is found in sandy soil along roadsides. The first authentic reports of this species from Porter and La Porte counties were by Deam et al. (1951) and (1953). The Cook county reports of Higley and Raddin (1891), Mosher (1918) and Pepoon (1927) are based on a lost *Shipman* specimen which is probably *A. scoparius*.

Arrhenatherum elatius (L.) Presl. DU PAGE: Wheaton, *Glassman 4069* (CHI); WILL: Romeo, *Umbach* (CHI); Braidwood, *Vytanovych 4170* (CHI). First records for Du Page and Will counties.

Avena fatua L. LAKE (Illinois): Highland Park, *Glassman 4087* (CHI); LAKE (Indiana): Hammond, *Glassman 4214* (CHI). A European introduction found mainly along railroad tracks in the region. Both cited specimens are new records for those counties.

Brachyelytrum erectum (Schreb.) Beauv. LAKE (Illinois): Biltmore estates, *Steyermark 65948* (F). Also known from Cook and Porter counties.

Bromus commutatus Schrad. COOK: Chicago, *Glassman* 3630, 3637, 4252; Northlake, *Glassman* 4089; Lincolnwood, *Glassman* 4093, 4094 (CHI); LAKE (Illinois): Grayslake, *Glassman* 4110, 4112; Libertyville, *Glassman* 4116 (CHI); DU PAGE: Glen Ellyn, *Glassman* 4050, 4093 (CHI); Wheaton, *Moffatt* 3356 (WIS); West Chicago, *Glassman* 4071, 4072 (CHI); WILL: Gougars, *Glassman* 4297, 4307, 4310; Romeo, *Umbach* 1712 (CHI); LA PORTE: Trail Creek, *Potzger* 10281 (B). Not listed from the Illinois portion of the Chicago region by Jones and Fuller (1955), therefore, all four county records are new. In Indiana, only specimens from Lake county have been seen, hence the La Porte county record is also new. This species resembles *B. racemosus* L. rather closely and both are often found growing together along railroad tracks. A key differentiating the two taxa in the Chicago region follows:

Plants about 50-70 cm. tall, panicles open, 10-20 cm. long, main branches stiff and ascending, up to 10 cm. long *B. commutatus*.
Plants usually 20-30 cm. tall, panicles somewhat contracted, 5-9 cm. long, main branches up to 4 cm. long *B. racemosus*.

Bromus inermis Leyss. DU PAGE: Glen Ellyn, *Glassman* 4046 (CHI); WILL: Gougars, *Glassman* 4311 (CHI). First records for Du Page and Will counties.

Bromus japonicus Thunb. COOK: Saganashkee Slough, *Glassman* 4287, 4289 (CHI). Not previously reported from the Illinois part of the Chicago region. This species closely resembles *B. commutatus*, but can be distinguished from that taxon by the very wavy panicle branches which are spreading or drooping.

Bromus latiglumis (Shear) Hitch. LA PORTE: Along Kankakee River, *C. Ek* (B). First record for that county.

Bromus racemosus L. COOK: Chicago, *Drouet* 12736a; Lincolnwood, *Glassman* 4093 (CHI); LAKE (Illinois): South of Grayslake, *Glassman* 4110 (CHI); DU PAGE: Villa Park, *Glassman* 4082 (CHI). First specimens I have seen for the Chicago region. No specimens were found to verify the reports of Pepon (1927) or Jones and Fuller (1955) for Cook County.

Bromus secalinus L. WILL: Four miles east of Steger,

Drouet and Louderback 13524 (CHI). Not previously reported from Will county.

Bromus squarrosus L. PORTER: Dunes State Park, *Drouet 12715* (CHI). First reported from the region (Lake county, Indiana) by Steyermark and Swink (1955).

Diplachne fascicularis (Lam.) Beauv. Jones (1950) and Jones and Fuller (1955) list this taxon as *Leptochloa fascicularis* (Lam.) Gray; however, Fernald (1950) splits off *Diplachne* from *Leptochloa* and assigns each genus to separate tribes. Only known in the Chicago region from three specimens (*Moffatt 485, 554* and *Moffatt*, no number) from Chicago. One of these specimens, *Moffatt* (no number), is the basis for the report of *Triplasis purpurea* (Walt.) Chapm. by Pepon (1927).

Echinochloa walteri (Pursh) Heller. No specimens have been seen for the Lake county (Illinois) report of Jones and Fuller (1955). A specimen collected from Algonquin by *Nason* (ILL) in 1879, however, was mistakenly placed in Lake county instead of McHenry county where it belongs.

Eleusine indica (L.) Gaertn. WILL: Braidwood, *Evers 34800* (ILLS); LAKE (Indiana): Gary, *Thieret 1417* (CHI). First records for these two counties.

Elymus villosus Muhl. f. **villosus**. LAKE (Illinois): Biltmore Estates, *Steyermark 65947* (F); WILL: Wheatland, *Umbach 4016, 4032, 7926* (WIS). Not previously reported from Lake and Will counties. Otherwise known from Cook and Porter counties in the region.

Elymus villosus f. **arkansanus** (Scribn. and Ball) Fern. PORTER: Five miles west of Michigan City, *Kriebel 10310* (PUR). First reported from the region (Du Page county) by Glassman (1957).

Eragrostis capillaris (L.) Nees. LAKE (Indiana): Gary, *Thieret 1509* (CHI). The first specimen I have seen for the Indiana part of the Chicago region. Listed by Peattie (1930) from the Indiana Dunes but no specimen was cited. The Du Page county report of Pepon (1927) from Wheaton, based on *Moffatt 3413* (CHI), is actually *E. frankii* C. A. Meyer.

Eragrostis poaeoides Beauv. COOK: Chicago, *Glassman*

4240; Burnham, *Glassman 4194*; Northlake, *Glassman 4086* (CHI); DU PAGE: West Chicago, *Glassman 4076* (CHI); WILL: Gougars, *Glassman 3837* (CHI); LAKE (Indiana): Gary, *Glassman 3922*; Hammond, *Glassman 4108* (CHI). First reported from the Indiana part of the region by Glassman (1957) from Porter county; the Lake county records are new. No specimens have been found to support the Cook and Du Page county listings of Jones and Fuller (1955); these are the first plants seen by me for the Illinois portion of the region.

Festuca rubra L. COOK: Chicago, *Glassman 3637a*; Skokie, *Glassman 5300* (CHI); LAKE (Illinois): Grayslake, *Glassman 4111*; Wauconda, *Glassman 4128* (CHI). Probably introduced into the region as a pasture or lawn grass. At present, found along roadsides and in vacant lots. Originally reported from the region by Deam et al. (1947) from Porter county; the Cook and Lake county records are new.

Glyceria grandis Wats. ex Gray. LAKE (Illinois): Four miles N.E. of Volo, *Glassman 4129* (CHI); PORTER: Beverly Shores, *Glassman 3875* (CHI). First authentic specimens seen by me for the Chicago region. No specimens were found to verify the listing of Pepon (1927).

Leptoloma cognatum (Schult.) Chase. WILL: Custer Park, *Steyermark 64831*, *Swink 2489* (F). First record for Will county.

Muhlenbergia mexicana (L.) Trin. f. **ambigua** (Torr.) Fern. LAKE (Illinois): Lake Villa, *Evers 41719* (ILLS). First record for the Chicago region. Differs from the species in having long awned (4-10 mm.) lemmas.

Panicum clandestinum L. WILL: Custer Park, *Swink 2433* (F). First record for Will county. Otherwise known from Cook and Porter counties.

Panicum dichotomiflorum Michx. var. **puritanorum** Svenson. COOK: Morton Grove, *Glassman 5591* (CHI). This is the first authentic record for the Chicago region. Chase (1951) listed this variety from Indiana which was probably based on a Jasper county specimen cited by Deam (1940). The following key differentiates the species from its variety:

Culms rather robust, 50-100 cm. long; spikelets acute, averaging 2.5 mm. long; plants of dry soil *P. dichotomiflorum*.
 Culms rather slender, usually less than 50 cm. long; spikelets less pointed, averaging 2.0 mm. long; plants of damp or wet soil
 var. *puritanorum*.

Poa palustris L. LA PORTE: Eight miles S.W. of La Porte, *Kriebel 8248* (PUR). Not previously reported from this county.

Setaria glauca (L.) Beauv. WILL: Monee, *Evers 21548* (ILLS); Plainfield, *D. Chapp 1* (CHI). First records for Will county. Now reported from all counties in the Chicago region. Deam (1929), (1940), Deam et al. (1946), Chase (1951), and Jones and Fuller (1955) call this plant *S. lutescens* (Weigel) Hubb., but Fernald (1950), Reeder (1951) and Gleason (1952) maintain that the valid name is *S. glauca*.

Sporobolus asper (Michx.) Kunth. DU PAGE: Glen Ellyn, *Swink* (F). The first specimen I have seen for this county. Pepon (1927) cites a *Moffatt* specimen from Glen Ellyn, but it is *S. neglectus* Nash.

Triplasis purpurea (Walt.) Chapm. COOK: Along Belt R.R., Chicago, *Thieret 1019* (F). Jones and Fuller (1955) list this species for Cook and Lake counties. The Cook county report is based on *Moffatt*, Chicago, Center Ave. and 47th St. (ILL), but the specimen is actually *Diplachne fascicularis*. I have not seen a Lake county, Illinois, specimen; *Thieret 1019* may be the first authentic record for the Illinois part of the Chicago region. Otherwise known from all three counties in Indiana.

EXCLUDED SPECIES

Cinna latifolia (Trev.) Griseb. No specimens have been seen to support the reports of Mosher (1918) and Pepon (1927) from Lake county, Illinois (based on *Gates*, Beach, in 1909); Jones (1945), (1950) and Jones and Fuller (1955) from Cook and Lake counties; and Peattie (1930) from Lake county, Indiana. These entries probably should be referred to *C. arundinacea* L., a similar species. Deam (1940) lists *C. latifolia* under excluded species for Indiana.

Eragrostis reptans (Michx.) Nees. The listings of Higley and Raddin (1891) and Jones and Fuller (1955) for Cook, Lake and Du Page counties are based on specimens of *E. hypnoides* (Lam.) B.S.P., a closely related species.

Leersia lenticularis Michx. No specimens have been seen to verify the reports of Pepoon (1927) and Fernald (1937). The listings of Jones and Fuller (1955) and Mosher (1918), as *Homalocenchrus lenticularis* Michx., for Cook county (based on Hill 76.1892, ILL, from Wolf Lake) and Will county (based on Hill 17.1911, ILL, from Homer) are actually *Leersia virginica* Willd.

Muhlenbergia sobolifera (Muhl.) Trin. No specimens have been found to substantiate the reports of Higley and Raddin (1891) and Pepoon (1927), based on Babcock in 1885, Stony Island, Cook county; or Peattie (1930) from Clarke, Lake county, Indiana. Not listed by Deam (1929), (1940) or Jones and Fuller (1955) from the Chicago region. These reports most likely refer to *M. tenuiflora* (Willd.) B.S.P., a similar species.

Oryzopsis racemosa (Sm.) Ricker. The report of Mosher (1918) from Cook county (based on Johnson, Glencoe) has not been verified. Deam (1929) cited this species for Porter county (based on Lyon, ND). In 1940, he omitted *O. racemosa* from the Chicago region and transferred the Lyon specimen, which I have seen, to *O. asperifolia* Michx.

Sporobolus brevifolius (Nutt.) Scribn. This entry is based on Hill 185.1906 (F, ILL) from Joliet, Will county (Hill, 1915). The specimen is *Muhlenbergia cuspidata* (Torr.) Rydb.

Sporobolus clandestinus (Bieler) Hitch. The specimen is *Sporobolus vaginiflorus* (Torr.) Wood. Gates 1488, (F), from Leyden, Cook county, is the basis of this entry by Mosher (1918), Pepoon (1927) and Jones and Fuller (1955).

Sporobolus virginicus L. This listing by Pepoon (1927) is based on Umbach 2290 (WIS) from Lake county, Illinois; but the specimen is actually *Agrostis palustris* Huds.

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